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(54) CONTROL DEVICE

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a control device capable of implementing the operation of equipment adapted to meet the demands of users.

SOLUTION: The control device to control various equipment on board of a vehicle while having interaction with a user by voice is provided with an interaction database formed of plural interaction data L14, L15... each appropriately describing contents on items of conditions (environments around the vehicle, conditions outside the vehicle, conditions inside the vehicle, etc.), in which the user is situated, user demands, the personal information of the user, the speech key word (user speech) of the user, and the operation contents of the equipment. Then the interaction data matching with the detected real conditions of the user, the estimated user demands, the present personal information of the user, and the speech key word of the user inputted through a microphone is retrieved from the database. According to the contents described by the item of the 'operation contents' in the interaction database, speech is made from a speaker, and another apparatus such as apparatus for information retrieval is operated. Therefore, it is possible to achieve the operation of apparatus adapted to meet the demands of the user.

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CLAIMS

[Claim(s)]
[Claim 1] A situation detection means to be the control unit which operates a predetermined device and to detect the situation that the user is placed, according to the information which was equipped with an input means to input the information in which the intention of a user to this user was reflected, and was inputted by this input means, A data storage means for activity setting out by which the data for activity setting out for setting up the activity of said device were memorized from the information inputted by said input means, and the situation detected by said situation detection means, If it searches from said data for activity setting out and there is corresponding activity, the activity corresponding to the information inputted by said input means, and the situation detected by said situation detection means The control unit characterized by having a setting-out means to set up the activity as activity of said device, and an appliance control means to operate said device according to the activity set up by this setting-out means.
[Claim 2] The information inputted by said input means in the control unit according to claim 1, While having a demand presumption means to presume a demand of a user, based on at least one of the situation detected by said situation detection means, and the activity of said device by said appliance control means Among the information inputted into said data storage means for activity setting out by said input means, the situation detected by said situation detection means, and the demand presumed by said demand presumption means From at least two or more items including said demand presumed, the 2nd data for activity setting out for setting up the activity of said device is memorized. Said setting-out means Among the information inputted by said input means, the situation detected by said situation detection means, and the demand presumed by said demand presumption means The control unit which will be characterized by setting up the activity as activity of said device if the activity corresponding to at least two or more items including said presumed demand is searched from said 2nd data for activity setting out and there is corresponding activity.
[Claim 3] While having an individual humanity news storage means to memorize a user's individual humanity news, in a control unit according to claim 2, for said data storage means for activity setting out Among the information inputted by said input means, the situation detected by said situation detection means, the demand presumed by said demand presumption means, and the individual humanity news memorized by said individual humanity news storage means From at least two or more items containing said individual humanity news, the 3rd data for activity setting out for setting up the activity of said device is memorized. Said setting-out means Among the information inputted by said input means, the situation detected by said situation detection means, the demand presumed by said demand presumption means, and the individual humanity news memorized by said individual humanity news storage means The control unit which will be characterized by setting up the activity as activity of said device if the activity corresponding to at least two or more items containing the individual humanity news memorized by said individual humanity news storage means is searched from said 3rd data for activity setting out and there is corresponding activity.
[Claim 4] The control device characterized by having a modification means to change said 3rd data for

activity setting out in a control device according to claim 3 according to the individual humanity news memorized by said individual humanity news storage means.

[Claim 5] In a control unit according to claim 4 for said individual humanity news storage means While the individual humanity news for two or more persons is memorized, out of the individual humanity news for two or more persons memorized by said individual humanity news storage means It has a discernment means to specify a current user's individual humanity news. Further said modification means It is the control unit characterized by changing said 3rd data for activity setting out according to the individual humanity news specified by said discernment means, and using for it the individual humanity news specified by said discernment means in case said setting-out means searches activity from said 3rd data for activity setting out.

[Claim 6] In claim 1 thru/or a control device according to claim 5 for said data storage means for activity setting out Only from the situation detected by said situation detection means, the 4th data for activity setting out for setting up the activity of said device is memorized. Said setting-out means The control unit which will be characterized by setting up the activity as activity of said device if the activity corresponding to the situation detected by said situation detection means is searched from said 4th data for activity setting out and there is corresponding activity.

[Claim 7] It is the control unit which said input means inputs the keyword which the user uttered as said information in claim 1 thru/or a control unit according to claim 6, and is characterized by said device consisting of a device for voice outputs for outputting voice, and other devices.

[Translation done.]

* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.
2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention] This invention relates to the control unit which operates predetermined devices, such as a device for information retrieval, and a device for voice outputs, according to the input in which the intention of users, such as utterance, a key stroke input, etc. of a user, was reflected.
[0002]
[Description of the Prior Art] That to which a user performs actuation corresponding to the voice command as navigation equipment for recent years, for example, automobiles, by uttering the language beforehand defined as a voice command is put in practical use.
[0003] For example, while the control section which consists of a microcomputer which accomplishes the center of the equipment concerned makes devices for information retrieval, such as a CD-ROM drive, search the name of a place, a facility, etc. near a its present location, he is trying to make the voice for advice "it is near OO" output with this kind of equipment, from the device for voice outputs which consists of a loudspeaker etc. based on that retrieval result, if a user utters the voice command a "present location."
[0004] Moreover, when the name of a place is uttered, while the control section of the equipment concerned, for example, makes the device for information retrieval search the circumference map of the name of a place by which utterance was carried out [above-mentioned] after a user utters the voice command "map retrieval", he is trying to display the circumference map of the name of a place by which utterance was carried out [above-mentioned] on the device for a display which consists of CRT etc. based on the retrieval result.
[0005]
[Problem(s) to be Solved by the Invention] However, with the above-mentioned conventional equipment, the activity (namely, the content of retrieval what to search) of the device for information retrieval, the activity (namely, the content of utterance with voice) of the device for voice outputs, etc. are set to one to one voice command. Therefore, in order to obtain the device actuation (the content of retrieval, the content of utterance, etc.) desired truly, the user did not have to be able to utter more voice commands and was not able to get desired device actuation in many cases.
[0006] For example, suppose that it programmed temporarily in equipment conventionally so that control action of searching the restaurant near a its present location to the utterance keyword of users, such as "a restaurant and retrieval" and guiding this retrieval result with voice might be performed. However, when the car is running the highway in the case of this example, even if a user wants to come to have a meal and it speaks with "a restaurant and retrieval", the restaurant which can go only from an ordinary road will be shown and it will become meaningless information offer.
[0007] In addition, such a problem is the same also about the case where a user inputs an intention of him not only when inputting an intention of him by utterance, but by a key stroke input etc. This invention is made in view of such a problem, is the fewer input from a user and aims at offering the control unit which can realize device actuation adapted to want of the user.

[0008]
[The means for solving a technical problem and an effect of the invention] The control unit of this invention according to claim 1 made in order to attain the above-mentioned object is equipped with an input means M1 to input the information in which the intention of a user to this user was reflected, and operates the predetermined device M3 according to the information (henceforth input) inputted by the input means M1 so that it may illustrate to drawing 1 .

[0009] In addition, as a device M3, various things, such as a device for a communication link by the device for information retrieval by which information is retrieved from a predetermined database, the device for voice outputs which outputs voice, wireless, or the cable, air-conditioning equipment, audio equipment, such as television and a tape recorder, devices for a display, such as CRT and liquid crystal, and a lighting device, can be considered. And you may be one, and two or more devices M3 which the control unit concerned operates may reach, and the number of them may be [two or more].

[0010] Moreover, as information which the input means M1 inputs, various things, such as a keyword of the voice which the user uttered, and information by a user's key stroke or switch actuation, can be considered. Furthermore, you may make it include no inputting (that is, a user not inputting information intentionally) as information which the input means M1 inputs.

[0011] Especially the control unit of this invention is equipped with a situation detection means M5 detect the situation that the user is placed, and the data-storage means M7 for activity setting out, and the data D1 for activity-setting out for setting up the activity of a device M3 are memorized here from the information inputted into the data storage means M7 for activity setting out by the input means M1, and the situation detected by the situation detection means M5.

[0012] And if there is activity to which the setting-out means M9 searches the activity corresponding to the information inputted by the input means M1 and the situation detected by the situation detection means M5 from said data D1 for activity setting out, and corresponds, the activity will be set up as activity of said device M3. Then, the appliance control means M11 operates a device M3 according to the activity set up by said setting-out means M9. In addition, in this invention, the content of do-nothing operation (that is, don't operate a device M3) is also included as activity of a device M3.

[0013] According to the control unit of such this invention, according to the situation that not only the input from a user inputted by the input means M1 but the user is placed, the activity of a device M3 is changeable. That is, even if the input from a user is the same, according to the situation that the user is placed, activity of a device M3 can be made the optimal. Therefore, the device actuation adapted to want of the user is realizable by the fewer input from a user.

[0014] The control unit according to claim 2 is added and equipped with the demand presumption means M13 to the control unit according to claim 1 so that it may illustrate to drawing 1 . Next, this demand presumption means M13 A demand of a user is presumed based on at least one of the information inputted by the input means M1, the situation detected by the situation detection means M5, and the activity of the device M3 by the appliance control means M11.

[0015] And the 2nd data D2 for activity setting out for setting up the activity of a device M3 is further memorized from at least two or more items including the demand presumed by the demand presumption means M13 among the information inputted into the data-storage means M7 for activity setting out by the input means M1, the situation detected by the situation detection means M5, and the demand presumed by the demand presumption means M13.

[0016] The setting-out means M9 and among the information inputted by the input means M1, the situation detected by the situation detection means M5, and the demand presumed by the demand presumption means M13 If the activity corresponding to at least two or more items including the demand presumed by the demand presumption means M13 is searched from said 2nd data D2 for activity setting out and there is corresponding activity, the activity will be set up as activity of a device M3.

[0017] That is, based on at least one of the input from a user, the situation detected by the situation detection means M5, and the activity of the device M3 by the appliance control means M11, he presumes a demand of a user, and is trying to set up the activity of a device M3 for a demand of the user

who presumed as one of the parameters in a control unit according to claim 2.

[0018] Therefore, according to such a control unit according to claim 2, the device actuation based more on want of a user is realizable. In addition, what is necessary is just to set up beforehand the data D1 for activity setting out, and the 2nd data D2 for activity setting out exclusively so that the activity from which the setting-out means M9 differs simultaneously from each data D1 and D2 may not be discovered. Moreover, when the priority of retrieval was prepared in each data D1 and D2, and the setting-out means M9 searches every one to the activity of each data D1 and D2 according to the priority and has the corresponding activity, you may make it set up the activity as activity of a device M3.

[0019] Next, the control unit according to claim 3 is added and equipped with an individual humanity news storage means M15 to memorize a user's individual humanity news, to the control unit according to claim 2 so that it may illustrate to drawing 1 . Further and for the data storage means M7 for activity setting out Among the information inputted by the input means M1, the situation detected by the situation detection means M5, the demand presumed by the demand presumption means M13, and the individual humanity news memorized by the individual humanity news storage means M15 From at least two or more items containing the individual humanity news memorized by the individual humanity news storage means M15, the 3rd data D3 for activity setting out for setting up the activity of a device M3 is memorized.

[0020] The setting-out means M9 and among the information inputted by the input means M1, the situation detected by the situation detection means M5, the demand presumed by the demand presumption means M13, and the individual humanity news memorized by the individual humanity news storage means M15 If the activity corresponding to at least two or more items containing the individual humanity news memorized by the individual humanity news storage means M15 is searched from said 3rd data D3 for activity setting out and there is corresponding activity, the activity will be set up as activity of a device M3.

[0021] According to such a control unit according to claim 3, by memorizing the individual humanity news of the user who uses the equipment concerned actually for the individual humanity news storage means M15, the user's individual humanity news is set to one of the parameters, and the activity of a device M3 will be set up. Therefore, according to this control unit, device actuation adapted to want peculiar to a user can be realized, and it is advantageous.

[0022] In addition, what is necessary is just to set up beforehand the data D1 for activity setting out, the 2nd data D2 for activity setting out, and the 3rd data D3 for activity setting out exclusively so that the activity from which the setting-out means M9 differs simultaneously from each data D1, D2, and D3 may not be discovered. Moreover, when the priority of retrieval was prepared in each data D1, D2, and D3, and the setting-out means M9 searches every one to the activity of each data D1, D2, and D3 according to the priority and has the corresponding activity, you may make it set up the activity as activity of a device M3.

[0023] Next, the control unit according to claim 4 is added and equipped with the modification means M17 to the control unit according to claim 3 so that it may illustrate to drawing 1 . And the modification means M17 changes said 3rd data D3 for activity setting out according to the individual humanity news memorized by the individual humanity news storage means M15.

[0024] According to such a control unit according to claim 4, the device actuation which uses the equipment concerned actually and which could change the activity of a device M3 and was further based on want peculiar to a user for every user is realizable. A control unit according to claim 5 is set to a control unit according to claim 4 so that it may illustrate to drawing 1 . Next, for the individual humanity news storage means M15 While the individual humanity news for two or more persons is memorized, it has a discernment means M19 to specify a current user's individual humanity news, out of the individual humanity news for two or more persons memorized by the individual humanity news storage means M15.

[0025] And the modification means M17 changes said 3rd data D3 for activity setting out according to the individual humanity news specified by the discernment means M19, and in case the setting-out means M9 searches activity from said 3rd data D3 for activity setting out, the individual humanity news

specified by said discernment means M19 is used for it.

[0026] According to this control unit according to claim 5, even if which man of two or more persons individual humanity news was remembered to be by the individual humanity news storage means M15 uses the equipment concerned, he can acquire the effectiveness by the control unit according to claim 4. Next, in the control unit according to claim 6, in the control unit according to claim 1 to 5, the 4th data D4 for activity setting out for setting up the activity of a device M3 is memorized only from the situation detected by the situation detection means M5 by the data storage means M7 for activity setting out so that it may illustrate to drawing 1 .

[0027] And if the setting-out means M9 searches the activity corresponding to the situation detected by the situation detection means M5 from said 4th data D4 for activity setting out and has the corresponding activity, the activity will be set up as activity of a device M3. That is, in the control unit according to claim 6, the activity of a device M3 is made to be set up only from the situation detected by the situation detection means M5.

[0028] When the situation that the user is placed turns into a specific situation according to such a control unit according to claim 6, irrespective of other factors, such as input from a user, a device M3 can be operated in predetermined activity, and it is advantageous. For example, when it has the device for voice outputs which outputs voice as a device M3, warning with voice etc. can be performed to a user in a specific situation.

[0029] In addition, what is necessary is just to set up beforehand the 4th data D4 for activity setting out, and other data for activity setting out (D1, D2, D3) exclusively so that the activity from which the setting-out means M9 differs simultaneously from each data may not be discovered. Moreover, the priority of retrieval may be prepared in the 4th data D4 for activity setting out, and other data for activity setting out (D1, D2, D3).

[0030] Next, in a control unit according to claim 7, the input means M1 inputs the keyword which the user uttered in a control unit according to claim 1 to 6 as said information (information in which the intention of a user was reflected). And a device M3 consists of a device for voice outputs for outputting voice, and other devices.

[0031] According to such a control device according to claim 7, the interactive appliance control equipment which operates other devices other than the device for voice outputs can be easily constituted according to the content of setting out of each data D1-D4 for activity setting out which the data storage means M7 for activity setting out is made to memorize, conversing with a user with voice. It becomes interactive information offer equipment which can offer exactly the information which the device for information retrieval by which information is retrieved from a predetermined database, then a user expect a device besides the above especially.

[0032]
[Embodiment of the Invention] Hereafter, the operation gestalt of this invention is explained using a drawing. Drawing 2 is a block diagram showing the configuration of the control device 1 of an operation gestalt first. In addition, the control unit 1 of this operation gestalt controls various devices carried in the car, being carried in an automobile (car) and having a dialog with the crew (mainly operator) and voice of a car as a user.

[0033] As shown in drawing 2 , the control unit 1 of this operation gestalt The input unit 3 for a user to input various kinds of commands, data, etc. by external actuation, The microphone 5 for inputting voice, and the loudspeaker 7 for outputting voice, The navigation equipment 9 of the common knowledge which performs the detection, path advice, etc. to the current position (its present location) of a car, The display 11 for displaying an image, and the air-conditioner equipment 13 which controls air conditioning in the car, The audio equipment 15 which consists of a cassette tape recorder, CD (compact disk) player, MD (mini disc) player, radio, television, etc., The broadcast terminal of well-known VICS (Vehicle Information and Communication System), The communication device 17 which performs data communication by wireless between the Internet broadcast terminals which are connection windows with the Internet, It connects with the various sensors 19 for detecting car operational status, such as the vehicle speed and an acceleration-and-deceleration condition, the temperature of car inside and outside,

the existence of a raindrop, etc., and other control units (graphic display abbreviation) which control the door lock of a car, a windowpane (power window), an engine, a brake gear, etc.

[0034] In addition, navigation equipment 9 is equipped with the actuation key for the CD-ROM drive for reading data and a user to input a command etc. from CD-ROM which memorized data for path advice, such as GPS equipment of the common knowledge for detecting the current position of a car, and map data, name of a place data, facility name data, and its CD-ROM. And if the command which directs the path advice to the destination and the destination through an actuation key from a user is inputted, navigation equipment 9 will display a road map including the optimal path for resulting to the current position and the destination of a car on a display 11, and will perform path advice. Moreover, if the road map for path advice is not only displayed, but various images, such as a menu for information retrieval, are displayed on an indicating equipment 11 and audio equipment 15 is further set as the mode of television with navigation equipment 9, the receiving image of television received by the television tuner with which the audio equipment 15 was equipped will be displayed on it.

[0035] And the system control section 21 constituted centering on the microcomputer with which a control unit 1 consists of CPU, a ROM, RAM, etc., The interface 23 which inputs the command and data from an input device 3 into the system control section 21 (I/F), The voice input section 25 which changes into digital data the sound signal inputted from the microphone 5, and inputs it into the system control section 21, The speech synthesis section 27 to which the text data outputted from the system control section 21 is changed into the sound signal of an analog, it outputs to a loudspeaker 7, and singing of the loudspeaker 7 is carried out, It has the appliance control interface (appliance control I/F) 29 which connects the above-mentioned navigation equipment 9, an indicating equipment 11, air-conditioner equipment 13, audio equipment 15, a communication device 17, the various sensors 19, and other control devices and system control sections 21 possible [data communication].

[0036] Moreover, the control unit 1 is equipped with the Internet address database 31 which memorizes the address (Internet address) of the Internet, and the retrieval control section 33 in order to retrieve and acquire the information on desired from the Internet with a communication device 17. And when the system control section 21 outputs the retrieval keyword showing the content of retrieval (contents) to the retrieval control section 33, the retrieval control section 33 operates a communication device 17 through appliance control I/F29, retrieves the information corresponding to the above-mentioned retrieval keyword from the Internet broadcast terminal, and makes the retrieval result input into the system control section 21. Moreover, in the Internet address database 31, the Internet address used by the retrieval control section 33 in the past is memorized by the command from the system control section 21, and the retrieval control section 33 will reuse the Internet address in the Internet address database 31, if the same retrieval keyword as the retrieval keyword inputted in the past is received from the system control section 21.

[0037] In addition, with this operation gestalt, it is equivalent to the device M3, and hereafter, a loudspeaker 7, navigation equipment 9, the CD-ROM drive (graphic display abbreviation) with which the navigation equipment 9 was equipped, an indicating equipment 11, air-conditioner equipment 13, audio equipment 15, a communication device 17, and other control units (graphic display abbreviation) name these generically, and call it a device M3. Moreover, among these devices M3, a loudspeaker 7 is equivalent to the device for voice outputs, and except [its] is equivalent to other devices.

[0038] And the utterance further outputted to a control unit 1 from a loudspeaker 7 As a means to memorize the data for setting up the content (namely, activity of a loudspeaker 7) of (also calling it agent utterance hereafter), and the activity of a device besides the above of those other than loudspeaker 7 It has the dialogue data storage section 35 which memorizes a dialogue database, and the user profile storage section 37 which memorizes a user's individual humanity news for two or more persons (henceforth a user profile). In addition, the Internet address database 31 mentioned above with this dialogue data storage section 35 and the user profile storage section 37 is constituted by the nonvolatile memory in which read-out and the writing of data are possible.

[0039] Here, the dialogue database memorized by the dialogue data storage section 35 and the user profile memorized by the user profile storage section 37 are explained. First, as for the user profile as

individual humanity news memorized by the user profile storage section 37, the information on a proper is described by the user about each item, such as the following - (P-1) (P-11).

[0040] (P-1): Classifications of the man (general, the president, a young man, sex, etc.).

(P-2): Other identification information other than a name or the name for identifying the man further (a password, identification number, etc.).

(P-3): Date of birth (birthday).

[0041] (P-4): Hometown.

(P-5): Address.

(P-6): Occupation.

(P-7): Executive.

[0042] (P-8): Hobby.

(P-9): The place which goes by the object of a hobby well.

(P-10): The place which goes by the object of shopping well.

(P-11): Family structure, a family's name, and a family's date of birth.

[0043] In addition, this user profile is memorized by the user profile storage section 37 by write-in actuation of the system control section 21, when a user operates an input unit 3 and inputs the content of each above-mentioned item. Next, the dialogue database memorized by the dialogue data storage section 35 has the DS of a tabular format for the example, as shown in drawing 4 - drawing 8 . And it sets to drawing 4 - drawing 8 , and they are each lateral lines L1-L23. It is 1 set of dialogue data, and the dialogue database consists of plurality of such dialogue data. In addition, at drawing 4 - drawing 8 , they are each lines L1-L23. It is continued and expressed to two steps.

[0044] Namely, each set talk data which constitute a dialogue database The item of a classification of the dialogue data, and two or more items showing the situation that the user is placed (with this operation gestalt) The environment of a season, a time zone or time, the destination, a its present location, and the perimeter of a car, the situation outside a vehicle, and a situation in the car, The item of a demand of a user, the item of a user's condition, and the item of a user's individual humanity news, The item of the utterance (henceforth user utterance) of a user inputted through a microphone 5 and the voice input section 25, The item of the activity at the time of the control device 1 concerned operating a device M3 (the content of agent utterance, and activity of other devices other than loudspeaker 7), It has the data area for describing a corresponding content about each of the item of the presumed demand which is a demand of a user presumed, the item of the presumed condition which is in a user's condition presumed, and the item of the presumed related demand which are other demands of a user presumed. And each set talk data describe the content corresponding to the data area of each above-mentioned item. In addition, description means that the data showing the content corresponding to the data area secured beforehand are set.

[0045] Here, each item of such a dialogue database is explained concretely.

(C-1): The content as which the dialogue data expresses whether it is a thing about what kind of subject in a dialogue with a user is beforehand described by the item of a classification "a classification", and the content showing the classification of the agent utterance described by the item of "activity" mentioned especially later is described.

[0046] although there are a greeting, appreciation, a family, a meal, a motor pool, path advice, retrieval, shopping, a hobby, device actuation, etc. and the graphic display is not further carry out as a content describe by and this item of "classification", for example so that it may illustrate to drawing 4 - drawing 8 -- in addition, installation, a sport, and the destination -- it asks a question and checks, and it suits and ****, a halt, termination, etc. are.

[0047] (C-2): The content which subdivided further the four seasonses, such as any, early summer, midsummer, etc. of the four seasons, such as spring, summer, autumn, and winter, is beforehand described by the seasonal "a season" item.

(C-3): The content of the concrete time zone called daytime, night, early morning, midnight, etc. and when to when or the detailed time of how many minutes is described when by the item of a time zone or time "a time zone or time" on what [, what / month / what] in the morning.

[0048] And the item of this "time zone or time" has that the content is beforehand described to be, and the thing the system control section 21 describes the content to be serially. For example, the line L15 illustrated as the lines L1-L3 and the dialogue data of L7 which are illustrated to drawing 4 to drawing 6 and L16 In dialogue data, the content showing a time zone is beforehand described by the item of "a time zone or time." Moreover, line L11 illustrated to drawing 5 In ◇ in the item of "a time zone or time", the present time is serially updated by the system control section 21, and dialogue data are described.

[0049] (C-4): The destination which a user means is described by the system control section 21 by the item of the destination "the destination." In addition, the system control section 21 reads the destination set up by the user from navigation equipment 9, or acquires the content which should be described in the item of the "destination" according to the content of a dialogue with the user till then.

[0050] And the item of this "destination" has some which are not described to be that the content is described to be. For example, the line L12 illustrated to drawing 5 and L13 In dialogue data, the destination according to the content of a dialogue with the user till then is described by the system control section 21 in ◇ in the item of the "destination." Moreover, the above-mentioned line L12 illustrated to drawing 4 - drawing 8 and L13 The content is described by the item of the "destination" in the dialogue data of an except.

[0051] (C-5): The present location of a car is described by the system control section 21 by the item of a present location "a present location." In addition, the system control section 21 reads the present location of a car from navigation equipment 9, and acquires the content which should be described in the item of a "present location."

[0052] And the item of this "present location" has some which are not described to be that the content is described to be like the item of the "destination." For example, line L11 -L13 illustrated to drawing 5 In dialogue data, the present location of a car is described by the system control section 21 in ◇ in the item of a "present location." Moreover, above-mentioned line L11 -L13 illustrated to drawing 4 - drawing 8 The content is described by the item of a "present location" in the dialogue data of an except.

[0053] (C-6): The content showing the environment of the perimeter of a car is beforehand described by the environmental "an environment" item. Specifically, the content showing road environment, the content (it is easy to slide on road surface freezing and a road surface) showing a route (highway, ordinary road, national highway, prefectural road, etc.) condition, the contents (a speed limit, one-way traffic, DO NOT ENTER, etc.) showing a traffic environment, and the contents (the inside of the crest where the sea is near, and a town, before a station, etc.) showing a geography environment are described beforehand.

[0054] (C-7): The content showing the situation outside a vehicle is beforehand described by the item of the situation outside a vehicle "the situation outside a vehicle." The content which specifically expresses the weather of a its present location (being fine cloudiness, a light rain, rain, heavy rain, snow, thunder, a typhoon, etc.), The contents (being fine cloudiness, a light rain, rain, heavy rain, snow, thunder, a typhoon, etc.) showing the weather of the destination, the contents (delay, the occurrence of accident which it is congested and has become empty a little) showing a traffic situation, and the contents (those with a passing car, those with a flattery car, those with a precedence car, etc.) showing a car circumference situation are described beforehand. In addition, as a content showing a car circumference situation, the classification (a truck, a passenger car, motorbike, etc.) of a passing car or a flattery car can also be added and described.

[0055] (C-8): The content showing a situation in the car is beforehand described by the item of a situation "a situation in the car" in the car. The content which specifically expresses operational status (transit by the congested route, comfortable transit, those with oscillating, rate over, etc.), the content (one person and two persons -- many (three or more persons) -- a family companion -- or further) showing an entrainment condition Contents showing whenever [vehicle room air temperature], such as a detailed content what kind of man is sitting on which seat, the contents (a drive, with a family, a drive with a friend, date with a sweetheart, etc.) showing the migration object, the content showing an audio environment, etc. are described beforehand.

[0056] (C-9): The content showing the demand considered that a user has in the item of a demand "a demand" is described beforehand. Specifically, the content of air-conditioner actuation needlessness etc. which lowers a meal, a drink, shopping, a drive, rest, play, a park, an amusement park, a theme park, boring, tennis, a pool, a jogging, sea bathing, skiing, golf, golf course reservation, path advice, a motor pool, and air-conditioner laying temperature and which raises air-conditioner laying temperature is described.

[0057] (C-10): The content showing the mental condition or corporal condition considered that a user becomes is beforehand described by the item of a condition "a condition." concrete -- hungry -- being hungry -- before -- migration -- preparation (it is going to move -- a condition) -- good condition -- usual -- being hot -- a throat -- having got dry -- energy -- lively -- a drive -- enjoying oneself -- **** -- a meal -- inside -- music -- appreciation -- inside -- television -- appreciation -- inside -- a full stomach -- fatigue -- returning -- ** -- playing -- ** -- early -- the destination -- reaching -- ** -- rest -- inside -- being irritated -- **** -- getting angry -- **** -- mind -- sinking -- **** (falling -- ****) -- etc. -- having said -- the content -- describing -- having -- **** .

[0058] (C-11): The content of the item relevant to the content of description of other items (especially, "a classification", "a demand", "user utterance", "activity") in the dialogue data is described by the item of individual humanity news "individual humanity news" among each item (P-1 to P-11) of a user profile mentioned above.

[0059] And there are that the content of immobilization is beforehand described to be as an item of this "individual humanity news", and a thing by which the content of description is changed by the system control section 21 according to the user profile actually memorized by the user profile storage section 37. For example, in the dialogue data of the line L8 illustrated to drawing 4 , the content (this example those with a child) corresponding to the item of (P-11:family structure) of a user profile is beforehand described by the item of "individual humanity news." Moreover, in the dialogue data of the line L17 illustrated to drawing 6 , the content (at this example, skiing is a hobby) corresponding to the item of a (P-8:hobby) of a user profile is beforehand described by the item of "individual humanity news."

[0060] on the other hand, line L16 illustrated to drawing 6 a dialogue -- data -- setting -- "-- an individual -- humanity -- news -- " -- an item -- it can set -- [--] -- inside -- **** -- system control -- the section -- 21 -- a user profile -- (-- P - ten -- : -- shopping -- the object -- good -- going -- a place --) -- an item -- describing -- having had -- the content (this example A department store) -- describing -- having . moreover, line L18 illustrated to drawing 6 a dialogue -- data -- setting -- "-- an individual -- humanity -- news -- " -- an item -- it can set -- [--] -- inside -- **** -- system control -- the section -- 21 -- a user profile -- (-- P - nine -- : -- a hobby -- the object -- good -- going -- a place --) -- an item -- describing -- having had -- the content (this example D golf course) -- describing -- having .

[0061] the above-mentioned line L16 and L18 "-- an individual -- humanity -- news -- " -- an item -- **** -- beforehand -- a user profile -- each -- an item -- inside -- any -- an item -- describing -- having had -- the content -- [--] -- inside -- describing -- a thing -- being shown -- directions -- data -- setting -- having -- **** -- system control -- the section -- 21 -- the above -- directions -- data -- being based -- "-- an individual -- humanity -- news -- " -- an item -- it can set -- [--] -- inside -- a user profile -- the content -- describing -- coming -- **** . [that is,,,] Therefore, the above-mentioned line L16 and L18 The content of description of the item of "individual humanity news" will be changed into the user profile storage section 37 according to the user profile memorized actually.

[0062] In addition, the above-mentioned line L18 The content of a hobby in golf is also beforehand described by the item of the "individual humanity news" in dialogue data.

(C-12): The keyword under utterance of the user expected to be inputted through a microphone 5 and the voice input section 25 is beforehand described by the item of user utterance "user utterance." And with this operation gestalt, the keyword group described by the item of this "user utterance" serves as a recognition vocabulary of the control unit 1 concerned.

[0063] However, line L11 illustrated to drawing 5 The keyword described in < <>> according to the item of "user utterance" in dialogue data is a variable data supposing the proper noun showing the name of a place being inputted, and the keyword described in [] is a variable data supposing the language

showing the class of cooking being inputted. Moreover, line L17 illustrated to drawing 6 The keyword described in < <>> according to the item of "user utterance" in dialogue data is a variable data supposing the proper noun showing the identifier of a crest being inputted.

[0064] (C-13): The activity of the device M3 corresponding to the content which the activity at the time of the control device 1 concerned operating a device M3 (the content of the agent utterance which should be outputted from a loudspeaker 7, and activity of other devices other than loudspeaker 7) is beforehand described, and described by the dialogue data especially in the above (C-1) of - (C-12) and each item is described by the item of activity "activity."

[0065] For example, in the dialogue data of the line L9 illustrated to drawing 5 , while making the CD-ROM drive or communication device 17 with which navigation equipment 9 was equipped search a nearby restaurant from a its present location in the item of "activity", based on the retrieval result, it is "meal from a loudspeaker 7. this -- if it becomes near, there is a store of the <a>, <b>, <c>, etc. affair <X1>. Where does it eat? The activity of the device M3 of making the agent utterance " output is described beforehand. In addition, a communication device 17 is made to communicate with the Internet broadcast terminal, and is made to retrieve required information from the Internet.

[0066] Moreover, line L10 illustrated to drawing 5 In dialogue data in the item of "activity" While making the above-mentioned CD-ROM drive or a communication device 17 search two near parking areas (or service area) from a its present location If it is an after <<e> parking area from a loudspeaker 7 to "<d> parking area based on the retrieval result, it is a part for after <X3 >. [of a part for X2 >, and a degree] The activity of the device M3 of making the agent utterance " output is described beforehand.

[0067] Furthermore, for example, in the dialogue data of the line L19 illustrated to drawing 7 , whenever ["room air temperature] is over 40 degrees C from the loudspeaker 7 in the item of "activity." Air-conditioner laying temperature is lowered. While making the agent utterance " output, the activity of the device M3 of making the temperature of the vehicle interior of a room lowered to air-conditioner equipment 13 is described beforehand.

[0068] In drawing 5 and drawing 6 , in addition, the alphabet, and OO restaurant and C crest skiing area from a to k among the alphabetic characters in <> indicated by the item of "activity" The proper noun obtained by retrieval actuation (specifically, a, b, c, f, and OO restaurant) The searched restaurant name, the parking-area name with which d and e were searched, the motor pool name with which g was searched, the route name with which h and i were searched, and the shopping center name with which j and k were searched -- it is -- X1 from -- X5 up to -- the notation which starts in X Numeric values acquired by retrieval actuation, such as a number and time amount It is (the numeric value which specifically expresses the time of day of the restaurant f where the numeric value showing the total number of cases, such as the restaurants a, b, and c where X1 was searched, X2, the numeric value showing the duration to the parking areas d and e with which Xthree was searched, X4, and X5 were searched which can be reserved).

[0069] As an item of "activity", there are some by which the content of description is changed by the system control section 21 according to the user profile actually memorized by the user profile storage section 37 like the item of "individual humanity news" on the other hand further. ** for example, line L16 illustrated to drawing 6 [] [in / on dialogue data and / the item of "activity"] -- inside, the content (this example A department store) described by the (item which goes by the object of P-10:shopping well) of a user profile is described by the system control section 21. moreover, line L18 illustrated to drawing 6 [] [in / on dialogue data and / the item of "activity"] -- inside, the content (this example D golf course) described by the (item which goes by the object of a P-9:hobby well) of a user profile is described by the system control section 21.

[0070] the above-mentioned line L16 and L18 "-- activity -- " -- an item -- **** -- beforehand -- a user profile -- each -- an item -- inside -- any -- an item -- describing -- having had -- the content -- [--] -- inside -- describing -- a thing -- being shown -- directions -- data -- setting -- having -- **** -- system control -- the section -- 21 -- the above -- directions -- data -- being based -- "-- activity -- " -- an item -- it can set -- [--] -- inside -- a user profile -- the content -- describing -- coming -- **** . [that is,] Therefore, the above-mentioned line L16 and L18 The content of description of the item of "activity" (in

the case of this example the content of agent utterance) will be changed into the user profile storage section 37 according to the user profile memorized actually.

[0071] as the activity of the device M3 which the item of "activity" of the line L16 illustrated to drawing 6 shows when it explains concretely -- above -- [] -- while making a communication device 17 search from the Internet the target product of the bargain performed at A department store described inside today, based on the retrieval result, it is "A department store from a loudspeaker 7. The bargain of OO (for example, electrical machinery supply) is done today. It becomes a thing of making the agent utterance " output. moreover -- as the activity of the device M3 which the item of "activity" of the line L18 illustrated to drawing 6 shows -- above -- [] -- based on the content (D golf course) described inside, it is "D golf course from a loudspeaker 7. Is reservation status investigated? It becomes a thing of making the agent utterance " output.

[0072] (C-14): In the item of a presumed demand "a presumed demand" While the actual situation that the user is placed turns into a situation described in the item (C-2 to C-8) of the situation in the dialogue data A user utters the keyword described by the item (C-12) of "user utterance" in the dialogue data. Furthermore, when it is assumed that device actuation described in the item (C-13) of the "activity" in the dialogue data was performed actually, the content of the demand sensibly considered that a user has is described beforehand.

[0073] And the variation (class) of the content described by the item of this "presumed demand" is the same as that of the content described by the item of a "demand" mentioned above.

(C-15): In the item of a presumed condition "a presumed condition" Like the item of a "presumed demand", while turning into a situation described in the item (C-2 to C-8) of the situation in the dialogue data, the actual situation that the user is placed A user utters the keyword described by the item (C-12) of "user utterance" in the dialogue data. Furthermore, when it is assumed that device actuation described in the item (C-13) of the "activity" in the dialogue data was performed actually, the content in the condition that it is thought sensibly that a user becomes is described beforehand.

[0074] And the variation of the content described by the item of this "presumed condition" is the same as that of the content described by the item in the "condition" of having mentioned above.

(C-16): The content of demand with the another content described in the item of "a presumed demand" in the dialogue data among the demands sensibly considered that a user has in the item of a presumed related demand "a presumed related demand" based on the same assumption as the item of the above "a presumed demand" is described beforehand.

[0075] And the variation of the content described by the item of this "presumed related demand" is the same as that of the content described by the item of a "demand" mentioned above. In addition, in this operation gestalt, although the content is described by all dialogue data about "a classification" and two items with "activity" as shown in drawing 4 - drawing 8 , the content may not be described about other items. That is, the part of the blank in drawing 4 - drawing 8 shows that the content is not described. And according to the content described in the item of "activity", it should just determine whether the content is described in "a classification" and which items other than "activity." However, the corresponding content is described by at least one or more items among "a classification" and items other than "activity."

[0076] Next, in the control unit 1 of this operation gestalt constituted as mentioned above, the processing performed in the system control section 21 is explained using drawing 3 . As shown in drawing 3 , when the ignition switch (graphic display abbreviation) of a car is turned on and a power source is supplied to the control unit 1 concerned, the system control section 21 At step (it is hereafter described as "S") 110, it first minds any with an input unit 3, I/F23 and a microphone 5, and the voice input section 25 they are. The identification information (for example, a name, a password, an identification number, a card number, etc.) from a current user (user) inputted as a key input or voice is read. In addition, you may make it read the information on an ID card as identification information.

[0077] And the user profile the content (a name and other identification information) described by the item (P-2) mentioned above out of the user profile for two or more persons memorized by the user profile storage section 37 in S120 continuing and whose identification information read by the above

S110 correspond is specified, and the specified user profile is memorized as a current user's user profile to the buffer area beforehand set up in RAM.

[0078] And content setting out of the dialogue database in the dialogue data storage section 35 is further performed in S130 continuing using the user profile memorized to the above-mentioned buffer area. That is, based on the directions data, the content of the user profile in the above-mentioned buffer area is described about the dialogue data with which the directions data mentioned above among each set talk data which constitute a dialogue database are set. the line L16 illustrated to drawing 6 by this processing of S130 and L18 a dialogue -- data -- it can set -- "-- an individual -- humanity -- news -- " -- "-- activity -- " -- each -- an item -- [--] -- inside -- the present -- a user -- a proper -- the content -- describing -- having -- ******** . [and]

[0079] Furthermore, in these S130, the content of the agent utterance described by the item of "activity" of a dialogue database is changed to that from which a tone differs according to the command from a user inputted through an input device 3 and I/F23. That is, in the control unit 1 of this operation gestalt, the character on utterance of the equipment 1 concerned (tone) can be changed now into condition, such as the man in the street, the president, a young man, a friend, and a girl, corresponding to the command from a user. In addition, the content of the agent utterance illustrated to drawing 4 - drawing 8 is standard form when a user specifies the "man in the street."

[0080] Next, in order that the system control section 21 may search the dialogue data which suited the actual situation that the user was placed from the dialogue database by processing after S220 later mentioned in S140 Based on the data of the clock built in self, time (a year, the moon, a day, time of day), the current four seasons, a current time zone, etc. detect the actual situation corresponding to the "season" of a dialogue database, and the item of "a time zone or time", and memorize the detection result to the above-mentioned buffer area.

[0081] Moreover, the system control section 21 describes the present time in the item of that "time zone or time" about the dialogue data (dialogue data of the line L11 illustrated to drawing 5 with this operation gestalt) which need to describe the content in the item of "a time zone or time" among each set talk data which constitute a dialogue database from these S140 as mentioned above.

[0082] And while reading the present location of a car from navigation equipment 9 in S150 continuing, the destination whose intention the user has is read from navigation equipment 9, or it grasps according to the content of a dialogue with the user till then, and the their present location and destination which were detected in this way are memorized to the above-mentioned buffer area.

[0083] Moreover, the system control section 21 describes the actual destination in the item of that "destination" about the dialogue data (the line L12 illustrated to drawing 5 with this operation gestalt, and dialogue data of L13) which need to describe the content in the item of the "destination" among each set talk data which constitute a dialogue database from these S150 as mentioned above. Furthermore, the system control section 21 describes a actual present location in the item of that "present location" about the dialogue data (dialogue data of line L11 -L13 illustrated to drawing 5 with this operation gestalt) which need to describe the content in the item of a "present location" among each set talk data which constitute a dialogue database from these S150 as mentioned above.

[0084] Next, by the Internet retrieval through a communication device 17 etc., by the classification of following ** - **, the system control section 21 checks the seasonal event and event a its present location and near the destination, and memorizes the result to the above-mentioned buffer area S160 continuing.

** : seasonal events common to the whole country, such as the New Year and Christmas.

[0085] ** : the event held every year although a festival etc. is local.

** : the event held to a local and special schedule.

And the dialogue data whose content of description of the item of a "classification" is "a greeting" among each set talk data which constitute a dialogue database from S170 continuing The detection result memorized by processing of the above S140 and S150 in the above-mentioned buffer area out of (the dialogue data of the line L1 specifically illustrated to drawing 4 - L6) (a season, a time zone, time, the destination, its present location), The dialogue data which suit most the detection result (the

environment of the perimeter of a car, the situation outside a vehicle, situation in the car) of the actual situation which was detected by the processing of S200 mentioned later and was memorized in the above-mentioned buffer area are searched. And the text data of the content of the agent utterance described by the item of "activity" of the searched dialogue data is further outputted to the speech synthesis section 27, and the utterance for "good morning" and the greeting of "hello" (agent utterance) is made to output from a loudspeaker 7.

[0086] For example, if the present time of day detected by the above S140 is from 4:00 before 11:00, the dialogue data of the line L1 illustrated to drawing 4 will be searched, and the utterance of "good morning" will be performed from a loudspeaker 7. Moreover, if the present time of day detected by the above S140 is from 11:00 before 18:00, the dialogue data of the line L2 illustrated to drawing 4 will be searched, and the utterance of "hello" will be performed from a loudspeaker 7.

[0087] in addition, the 1st time immediately after supplying a power source to the control unit 1 concerned, as for the processing for this greeting utterance of S170 -- or it is carried out only when predetermined conditions when going ahead with a dialogue with a user and going are satisfied further. Next, the silent condition that a sound signal is not inputted through a microphone 5 and the voice input section 25 in S180 the system control section 21 When it judges and a sound signal is inputted within between up Norikazu scheduled time (S180:NO), whether it continued beyond fixed time amount defined beforehand, and continued While extracting the keyword (utterance keyword) which the user uttered from the sound signal by which the input was carried out [above-mentioned] by progressing to S190, voice input processing which memorizes the extracted keyword to the above-mentioned buffer area is performed. And it progresses to S200 after that.

[0088] Moreover, when it judges with the silent condition having continued beyond fixed time amount, and having continued by the above S180 (S180:YES), the content of "being silent (or no response)" is memorized to the above-mentioned buffer area, and it goes to it after that S200. And in S200, among the actual situations (real situation) that the user is placed, processing for detecting real situations other than the item detected by the above S140 and S150 (that is, time and being in the real situation except spatial the environment of the perimeter of a car, the situation outside a vehicle, and each fruit situation of a situation in the car) is performed, and the detection result is memorized to the above-mentioned buffer area.

[0089] inside [being described by each item of the "environment" of a dialogue database, "the situation outside a vehicle", and "a situation in the car" by processing of S200 here] ** -- ** and a real situation are detected just. For example, the real situation of the road environment any, such as a highway, an ordinary road, a national highway, and a prefectural road, the routes under current transit are among the "environments" of the perimeter of a car, The real situation of the traffic environment where the speed limit of the route under current transit and the route under current transit are one-way traffic, or it is DO NOT ENTER, Each with the real situation of the geography environment where the current position of a car is near marine, or it is in a crest receives VICS information (information from the broadcast terminal of VICS) with a communication device 17, or detects it based on the information (current position and map data) from navigation equipment 9. And the real situation in the route condition of the route under current transit having frozen or being easy to slide among the "environments" of the perimeter of a car is detected based on the information from other control units which are controlling the brake gear.

[0090] Moreover, each of the real situation of the weathers (being fine cloudiness, a light rain, rain, heavy rain, snow, thunder, a typhoon, etc.) of a present location and the destination and the real situation of the traffic situation of the route under current transit being congested, or having become empty is detected by receiving VICS information with a communication device 17 among "the situations outside a vehicle." In addition, it is also detectable from the signal of the raindrop sensor of the various sensors 19 that the weather of a its present location rains. And the signal and camera from the ultrasonic sensor of the various sensors 19 detect the real situation of car circumference situations, such as existence of a flattery car, and existence of a precedence car, among "the situations outside a vehicle."

[0091] On the other hand, the signal from the temperature sensor of the various sensors 19 detects the real situation of whenever [room air temperature] among "situations in the car." Moreover, the signal

from the pressure sensor which detects the pressure which joins the bearing surface of a sheet detects the real situation of the entrainment condition of the number of crews of a car (one person, two persons, three persons or more) among "situations in the car."

[0092] Among "situations in the car", and operational status (transit by the congested route, comfortable transit, those with oscillating, etc.), An entrainment condition (detailed content what kind of man is sitting on the family companion and which seat), Or called it further the migration objects (a drive with a family, a drive with a friend, date with a sweetheart, etc.). About a real situation automatically undetectable using the information from navigation equipment 9, a communication device 17, the various sensors 19, other control units, etc. It detects because I ask by the message displayed on utterance and an indicating equipment 11 from a loudspeaker 7 to a user and have you teach by voice or key input from a user.

[0093] Next, the system control section 21 performs processing for presuming a current demand of a user and a condition in S210. The dialogue data used for operating a device M3 by the last processing of S270 and S280 mentioned later out of a dialogue database by processing of S210 here are read. The content described by both the items of "the presumed demand" of dialogue data and "a presumed related demand" which were read it memorizes to the above-mentioned buffer area as a demand presumed that the user has now, and the content further described by the item of the "presumed condition" of the dialogue data which carried out [above-mentioned] reading appearance is memorized to the above-mentioned buffer area as a condition presumed that the user has become now.

[0094] For this reason, when processing of S210 is finished, a current user's user profile (individual humanity news), the keyword (however, silent or the content of a no response is also included) which the user uttered, the content showing the real situation that the user is placed, and the content which presumed the demand of a user and the condition will be memorized in the above-mentioned buffer area in RAM.

[0095] Then, in S220 continuing, the system control section 21 accesses a dialogue database, and reads each set talk data. The content described by each item of a "season", "a time zone or time", the "destination", a "present location", a "environment", "the situation outside a vehicle", "a situation in the car", "a demand", a "condition", "individual humanity news", and "user utterance" about each set talk data, Matching with the content memorized in the above-mentioned buffer area is investigated.

[0096] The content the user specifically presumed matching with the keyword which spoke actually, and the keyword described by the item of "user utterance" of dialogue data, and a demand of a user to be, The content which presumed matching with the content described by the item of "a demand" of dialogue data, and a user's condition, Each content showing the real situation that matching with the content described by the item of the "condition" of dialogue data and a user are placed, Matching with the content described by each item of a "season", "the time zone or time" of dialogue data, the "destination", a "present location", a "environment", "the situation outside a vehicle", and "a situation in the car", and a current user's user profile, It investigates about each of matching ** with the content described by the item of the "individual humanity news" of dialogue data.

[0097] Moreover, especially in these S220, the dialogue data with which the content is described by the item of "a demand" and "user utterance" are preferentially read among the dialogue data in a dialogue database. and as processing for investigating matching, it gives [predetermined value / every / (for example, one point)] to the content and match which are memorized in the above-mentioned buffer area about each above-mentioned item of the dialogue data which carried out reading appearance, and let the sum total mark be an assessment value showing the degree of matching. However, mark may be changed about the specific item of each item of dialogue data.

[0098] And by processing of S220, the line number (namely, number of the line L shown in drawing 4 - drawing 8) is further memorized about the dialogue data of N individual (for example, eight pieces) sequentially from what has the computed largest assessment value among each set talk data to a different specific region from the above-mentioned buffer area beforehand set up in RAM.

[0099] And the greatest assessment value computed by the above S220 in S230 continuing (that is, among the dialogue data of N individual with which the line number was memorized in the above-

mentioned specific region) If the assessment value of the dialogue data whose computed assessment value is max judges whether it is larger than the threshold set up beforehand and is not larger than the threshold It judges that the contents (a user's utterance keyword or the content of the real situation) which should be detected by processing of S190 or S200 mentioned above are insufficient, and shifts to S240.

[0100] And in these S240, the utterance which asks a user the content of detection which run short is outputted from a loudspeaker 7, and it returns to S180 after that. Then, although processing of S180-S220 will be performed again, when an inquiry to the user by processing of S240 is performed in this way, by S220, an assessment value is calculated by the above-mentioned specific region only about the dialogue data of N individual with which the line number was memorized.

[0101] Moreover, when it judges with the greatest assessment value computed by the above S220 by the above S230 being larger than a threshold, it progresses to S250. In these S250, when it judges whether there are two or more dialogue data whose computed assessment values are max to the above-mentioned specific region and more than one are in it about it among the dialogue data of N individual with which the line number was memorized, it judges that it is necessary to narrow down one dialogue data from two or more of those dialogue data, and shifts to S260.

[0102] And in these S260, the utterance which asks a user the content for narrowing down one dialogue data from two or more above-mentioned dialogue data is outputted from a loudspeaker 7, and it returns to S180 after that. Then, also in this case, although processing of S180-S220 will be performed again, also when an inquiry to the user by processing of S260 is performed in this way, by S220, an assessment value is calculated by the above-mentioned specific region only about the dialogue data of N individual with which the line number was memorized.

[0103] On the other hand, when a negative judging is carried out by the above S250 (i.e., when the number of the dialogue data whose assessment values are max among the dialogue data of N individual with which the line number was memorized in the above-mentioned specific region is one) It progresses to S270, the dialogue data with which the assessment value became max are read, and the content described by the item of "activity" of the dialogue data is set up in RAM as activity of a device M3. And according to the activity set up by the above S270, a device M3 is operated in S280 continuing.

[0104] That is, among each set talk data which constitute a dialogue database from processing of S220-S280 The content a "season", "a time zone or time", the "destination", a "present location", a "environment", "the situation outside a vehicle", "a situation in the car", "a demand", a "condition", "individual humanity news", and the content described by each item of "user utterance" are remembered to be in the above-mentioned buffer area (the real situation that the user is placed) The content to express, the content which presumed the demand of a user and the condition, a current user's user profile, And he searches and chooses the dialogue data which suited most as the keyword which the user uttered, and is trying to operate the devices M3 including a loudspeaker 7 according to the content described by "activity" of the selected dialogue data.

[0105] And it judges whether after that, it progressed to S290 and the dialogue with a user was completed. In addition, in this judgment, when "it being noisy" from a user and the utterance keyword of "good-bye" are inputted, it judges with the dialogue having been completed, for example. And when it judges with the dialogue not being completed, it returns to S140, but when it judges with the dialogue having been completed, processing of the drawing 3 concerned is ended.

[0106] Next, an example is given and explained about an operation of the above control units 1. First, if a user utters keywords, such as a "meal" and "boiled rice", when the car is running the ordinary road, the dialogue data of the line L9 illustrated to drawing 5 will be chosen by processing of S220-S280, and the content described by the item of "activity" of the dialogue data (L9) will be set up as activity of a device M3. Consequently, a nearby restaurant is searched from a its present location by the CD-ROM drive or communication device 17 of navigation equipment 9, and it is "meal from a loudspeaker 7. this -- if it becomes near, there is a store of the <a>, <b>, <c>, etc. affair <X1>. Where does it eat? The agent utterance " is outputted.

[0107] On the other hand, line L10 which will be illustrated to drawing 5 by processing of S220-S280 if

a user utters keywords, such as a "meal" and "boiled rice", when the car is running the highway Dialogue data are chosen and the content described by the item of "activity" of the dialogue data (L10) is set up as activity of a device M3. Consequently, two near parking areas are searched from a their present location by the CD-ROM drive or communication device 17 of navigation equipment 9, and the agent utterance "it is a part for after <X3> if it is an after <<e> parking area to a <d> parking area" is outputted from a loudspeaker 7. [of a part for X2 > and a degree]

[0108] Thus, in the control unit 1 of this operation gestalt, the activity of a device M3 is changeable according to the actual situation that not only a user's utterance keyword inputted through a microphone 5 and the voice input section 25 but the user is placed. Therefore, even if a user's content of utterance is the same, according to the situation that the user is placed, activity of a device M3 can be made the optimal and device actuation (in the case of this example, it is information offer actuation) based on want of that user by the fewer input from a user can be realized.

[0109] When the car is running the ordinary road of Aichi Prefecture and Kariya-shi and a user utters the three keywords "Okazaki", a "meal", and the "India food", on the other hand, by processing of S220-S280 Line L11 illustrated to drawing 5 Dialogue data are chosen and the content described by the item of "activity" of the dialogue data (L11) is set up as activity of a device M3. Consequently, the time of day of Restaurant f and Restaurant f of the India food in Aichi Prefecture and Okazaki-shi which can be reserved is searched from the Internet etc. by the communication device 17, and agent utterance "<f> can be reserved to a part for <X5 > at the time of <X4 >" from a loudspeaker 7 is outputted. In addition, the above-mentioned line L11 In dialogue data, <Kariya> is described by the item of a "present location" by the processing of S150 till then.

[0110] And it is the above-mentioned line L11 in this way. When dialogue data are chosen By the following processing of S210, it is a line L11. The content (a meal, a picnic, a motor pool, rest, drink) described by both the items of "a presumed demand" of dialogue data and "a presumed related demand" While memorizing as a demand a user is presumed to be in the above-mentioned buffer area, it is a line L11. The content (before [hungry]) described by the item of the "presumed condition" of dialogue data is memorized as a condition that a user is presumed in the above-mentioned buffer area.

[0111] For this reason, the above-mentioned line L11 If especially a user does not answer after the agent utterance according to dialogue data is performed Line L12 illustrated to drawing 5 by the following processing of S220-S280 Dialogue data (Namely, the dialogue data with which the "ordinary road" was described by the item of a "environment" and the "meal" and the "motor pool" were described by the item of a "demand") are chosen, and the content described by the item of "activity" of the dialogue data (L12) is set up as activity of a device M3. Consequently, the motor pool g near the above-mentioned restaurant f is searched from VICS information etc. by the communication device 17, and agent utterance of "<g> being vacant as for a motor pool" from the loudspeaker 7 is outputted. In addition, the above-mentioned line L12 In dialogue data, <the restaurant f in Okazaki> and <Kariya> are described by each item of the "destination" and a "present location" by the last processing of S150, respectively.

[0112] Furthermore, it is the above-mentioned line L12 in this way. When dialogue data are chosen By the following processing of S210, it is a line L12. While the content (path advice) described by the item of "a presumed demand" of dialogue data is memorized as a demand a user is presumed to be in the above-mentioned buffer area Line L12 The content (preparation of migration) described by the item of the "presumed condition" of dialogue data is memorized as a condition that a user is presumed in the above-mentioned buffer area.

[0113] For this reason, the above-mentioned line L12 If especially a user does not answer after the agent utterance according to dialogue data is performed Line L13 illustrated to drawing 5 by the following processing of S220-S280 Dialogue data (Namely, the dialogue data with which the "ordinary road" was described by the item of a "environment" and "path advice" was described by the item of a "demand") are chosen, and the content described by the item of "activity" of the dialogue data (L13) is set up as activity of a device M3. Consequently, the main routes h and i and the delay situation of Routes h and i for going to the destination (Aichi Prefecture and Okazaki-shi) from a present location (Aichi Prefecture and Kariya-shi) are searched from VICS information etc. by the communication device 17, and agent

utterance of "recommending you to go by <i> since <h> is crowded" from a loudspeaker 7 is outputted. In addition, the above-mentioned line L13 In dialogue data, <Okazaki> and <Kariya> are described by each item of the "destination" and a "present location" by the last processing of S150, respectively.

[0114] On the other hand, when the dialogue data of the line L9 mentioned above are chosen By the following processing of S210, the content (a meal, a motor pool, rest, drink) described by both the items of "a presumed demand" of the dialogue data of a line L9 and "a presumed related demand" While memorizing as a demand a user is presumed to be in the above-mentioned buffer area, the content (hungry) described by the item of the "presumed condition" of the dialogue data of a line L9 is memorized as a condition that a user is presumed in the above-mentioned buffer area.

[0115] for this reason -- for example, if the user uttered the keyword "the place where somewhere is good" and has moreover got on by the family companion in that case, after the agent utterance according to the dialogue data of the above-mentioned line L9 is performed Line L14 illustrated to drawing 6 by the following processing of S220-S280 Dialogue data (Namely, an "ordinary road" is described by the item of a "environment" and a "family companion" is described by the item of "a situation in the car".) A "meal" is described by the item of a "demand" and "****" is described by the item of a "condition." The dialogue data with which "the place where somewhere is good" was described are chosen as the item of "user utterance", and the content described by the item of "activity" of the dialogue data (L14) is set up as activity of a device M3. Consequently, from the Internet etc., a nearby family restaurant is searched by the communication device 17 from a its present location, and the agent utterance "how it is at OO restaurant" is outputted from a loudspeaker 7 by it.

[0116] While people have ridden on in the car, when the demand of a user which the temperature of the vehicle interior of a room is 30 degrees C or more, and was presumed by processing of S210 is not "air-conditioner actuation needlessness", for example, moreover, moreover, by processing of S220-S280 Line L20 illustrated to drawing 7 Dialogue data are chosen and the content described by the item of "activity" of the dialogue data (L20) is set up as activity of a device M3. From the result and a loudspeaker 7 "it is hot. Is air-conditioner laying temperature lowered? Agent utterance of the question " is outputted.

[0117] And it is the above-mentioned line L20 in this way. When dialogue data are chosen By the following processing of S210, it is a line L20. While the content (air-conditioner laying temperature is lowered) described by the item of "a presumed demand" of dialogue data is memorized as a demand a user is presumed to be in the above-mentioned buffer area Line L20 The content (the hot throat got dry) described by the item of the "presumed condition" of dialogue data is memorized as a condition that a user is presumed in the above-mentioned buffer area.

[0118] for this reason, the above-mentioned line L20 after the agent utterance according to dialogue data was performed -- a user -- " -- that it is, and ", and "it not obtaining" or the keyword of "lowering" is uttered, or it is a no response by processing of S220-S280 Line L22 illustrated to drawing 8 Dialogue data are chosen and the content described by the item of "activity" of the dialogue data (L22) is set up as activity of a device M3. From the result and a loudspeaker 7 "I understand. Air-conditioner laying temperature is lowered. While the agent utterance " is outputted, it will operate so that air-conditioner equipment 13 may lower the temperature of the vehicle interior of a room.

[0119] On the other hand, the above-mentioned line L20 If a user utters "no" and the keyword of "not continuing ["disagreeable" or / this] not lowering" after the agent utterance according to dialogue data is performed, ["lowering"] Line L23 illustrated to drawing 8 by processing of S220-S280 Dialogue data are chosen and the content described by the item of "activity" of the dialogue data (L23) is set up as activity of a device M3. Consequently, while agent utterance of "making it as [this]" from a loudspeaker 7 is outputted, it will operate so that air-conditioner equipment 13 may maintain the temperature of the vehicle interior of a room.

[0120] Moreover, line L21 which will be illustrated to drawing 7 by processing of S220-S280 if a user utters the keyword "******" and "**********" when the temperature of the vehicle interior of a room is 20 degrees C or more Dialogue data are chosen and the content described by the item of "activity" of the dialogue data (L21) is set up as activity of a device M3. consequently, the case where the dialogue

data of the line L20 mentioned above are chosen -- the same -- from a loudspeaker 7 -- "-- it is hot. Is air-conditioner laying temperature lowered? Agent utterance of the question " is outputted.

[0121] And it is the above-mentioned line L21 in this way. When dialogue data are chosen the following processing of S210 -- line L21 The content (air-conditioner laying temperature is lowered -- I want to drink some -- I want to rest) described by both the items of "a presumed demand" of dialogue data and "a presumed related demand" While memorizing as a demand a user is presumed to be in the above-mentioned buffer area, it is a line L21. The content (the hot throat got dry) described by the item of the "presumed condition" of dialogue data is memorized as a condition that a user is presumed in the above-mentioned buffer area.

[0122] for this reason, the above-mentioned line L21 after the agent utterance according to dialogue data was performed -- a user -- ", if it is and "and the keyword of "not obtaining" are uttered Line L22 mentioned above by processing of S220-S280 Line L23 mentioned above by processing of S220-S280 when dialogue data were chosen and the user uttered conversely "no" and the keyword of being "disagreeable" Dialogue data will be chosen.

[0123] That is, in the control unit 1 of this operation gestalt, a demand of a user will be presumed by processing of S210 based on at least one of the actual utterance keyword from a user, a user's real situation, and the activity that operated the device M3 actually. And the dialogue data which have the demand presumed by processing of S210 as a content of description of the item of a "demand" are chosen by processing of S220-S280, and device actuation is performed by it based on the activity described by the item of "activity" of the selected dialogue data. In addition, it depends on the description condition [whether based on which content, a demand of a user is presumed by processing of S210 among the actual utterance keyword from a user, a user's real situation, and the activity of a device M3] of the dialogue data used for operating a device M3 by the last processing of S280.

[0124] Therefore, according to the control unit 1 of this operation gestalt, the device actuation (in the case of the above-mentioned example, information offer actuation and air-conditioner equipment 13 operate) based more on want of a user is realizable. When running the ordinary road by the family companion in the time zone from 9:00 to 21:00 and a user, for example, utters keywords, such as "shopping" and "shopping", next, by processing of S220-S280 Line L15 illustrated to drawing 6 Dialogue data are chosen and the content described by the item of "activity" of the dialogue data (L15) is set up as activity of a device M3. Consequently, the nearby shopping centers j and k are searched from a their present location by the CD-ROM drive or communication device 17 of navigation equipment 9, and agent utterance of "<j> and <k> being in near if it is shopping" from a loudspeaker 7 is outputted.

[0125] And it is the above-mentioned line L15 in this way. When dialogue data are chosen By the following processing of S210, it is a line L15. While the content (shopping, motor pool) described by both the items of "a presumed demand" of dialogue data and "a presumed related demand" is memorized as a demand a user is presumed to be in the above-mentioned buffer area Line L15 The content (preparation of migration) described by the item of the "presumed condition" of dialogue data is memorized as a condition that a user is presumed in the above-mentioned buffer area.

[0126] For this reason, after the agent utterance according to the dialogue data of the above-mentioned line L15 is performed, a user utters the keyword "a usual place", and moreover, it is the item (P-10: for the object of shopping) of that user's user profile. Line L16 which will be illustrated to drawing 6 by the following processing of S220-S280 if the content described at the place which goes well is "A department store" Dialogue data are chosen.

[0127] Namely, "9:00 to 21:00" are described by the item of "a time zone or time." An "ordinary road" is described by the item of a "environment" and a "family companion" is described by the item of "a situation in the car." "Shopping" is described by the item of a "demand" and "preparation of migration" is described by the item of a "condition." The dialogue data (L16) with which "it goes to A department store often" was described by the item of "individual humanity news", and "the usual place" was described by the item of "user utterance" are chosen. The content described by the item of "activity" of the dialogue data (L16) is set up as activity of a device M3. Consequently, the target product of the bargain performed at A department store today is searched from the Internet etc. by the communication

device 17, and it is "A department store from a loudspeaker 7. The bargain of OO (for example, electrical machinery supply) is done today. The agent utterance " is outputted. in addition -- the above -- a line -- L -- 16 -- a dialogue -- data -- setting -- "-- an individual -- humanity -- news -- " -- "-- activity -- " -- each -- an item -- it can set -- [--] -- inside -- **** -- S -- 130 -- processing -- current -- a user -- a proper -- " -- A -- a department store -- " -- describing -- having -- **** .

[0128] If the content with which a user utters the two keywords "C crest" and "skiing" at the season of winter, and is moreover described to be by the item (P-8: hobby) of the user's user profile on the other hand is "skiing" Line L17 illustrated to drawing 6 by processing of S220-S280 Dialogue data are chosen and the content described by the item of "activity" of the dialogue data (L17) is set up as activity of a device M3. Consequently, agent utterance of "starting the root guide to C crest skiing area" from a loudspeaker 7 is outputted, and the path advice actuation to C crest skiing area from the present location by navigation equipment 9 is started.

[0129] Moreover, while the content with which a user utters "golf" and two keywords of "being usual", and is moreover described to be by the item (P-8: hobby) of the user's user profile, for example is "golf" If the content described by the item (P-9: place which goes by the object of a hobby well) of this user profile is "D golf course" Line L18 illustrated to drawing 6 by processing of S220-S280 Dialogue data are chosen and the content described by the item of "activity" of the dialogue data (L18) is set up as activity of a device M3. Consequently, it is "D golf course from a loudspeaker 7. Is reservation status investigated? The agent utterance " is outputted. in addition, the above-mentioned line L18 a dialogue -- data -- setting -- "-- an individual -- humanity -- news -- " -- "-- activity -- " -- each -- an item -- it can set -- [--] -- inside -- **** -- S -- 130 -- processing -- current -- a user -- a proper -- " -- D -- a golf course -- " -- describing -- having -- **** .

[0130] Thus, in the control device 1 of this operation gestalt, the user profile which is the information on a proper is set to one of the parameters at the time of choosing dialogue data, and the activity of the device M3 according to the user's user profile is assigned to a user. Therefore, the device actuation adapted to want peculiar to a user is realizable.

[0131] And while the user profile for two or more persons is memorized by the user profile storage section 37, he specifies a current user's user profile and is trying to change automatically the content (the content of description of the item of "individual humanity news" and "activity") of the dialogue database by processing of S110-S130 according to the specified user profile. And he chooses the dialogue data which suit the user profile which carried out [above-mentioned] specification, and is trying to set up the activity of a device M3 according to the content described by the item of "activity" of the dialogue data.

[0132] Therefore, even if which man of two or more persons the user profile was remembered to be by the user profile storage section 37 uses the control unit 1 concerned, he can change the activity of a device M3 for every man of the, and can realize device actuation further based on want peculiar to the user. Next, line L19 which will be illustrated to drawing 7 by processing of S220-S280 if people have ridden on in the car, the temperature of the vehicle interior of a room moreover rises and it becomes 40 degrees C or more Dialogue data are chosen and the content described by the item of "activity" of the dialogue data (L19) is set up as activity of a device M3. Consequently, whenever ["room air temperature] is over 40 degrees C from the loudspeaker 7. Air-conditioner laying temperature is lowered. While the agent utterance " is outputted, it will operate so that air-conditioner equipment 13 may lower the temperature of the vehicle interior of a room.

[0133] That is, in the control device 1 of this operation gestalt, only from the real situation of the user who detected, dialogue data are chosen and the activity of a device M3 is set up. Therefore, when the situation that the user is placed turns into a specific situation, irrespective of other factors, such as a user's utterance, a device M3 can be operated in predetermined activity, and it is advantageous.

[0134] As explained in full detail above, according to the control unit 1 of this operation gestalt, according to a user's situation and a demand, actuation of devices, such as the content of utterance and air-conditioner equipment 13, can be made the optimal, and, moreover, a user can be exactly provided with useful information. Moreover, the dialogue which has familiarity with a user can be performed and

a sense of closeness can also be given to a user.

[0135] In addition, with this operation gestalt, processing of S180 and S190 is equivalent to the input means M1, processing of S140, S150, and S200 is equivalent to the situation detection means M5, processing of S220-S270 is equivalent to the setting-out means M9, and processing of S280 is equivalent to the appliance control means M11. And processing of S210 is equivalent to the demand presumption means M13, processing of S110 and S120 is equivalent to the discernment means M19, and processing of S130 is equivalent to the modification means M17.

[0136] Moreover, with this operation gestalt, the dialogue data storage section 35 is equivalent to the data storage means M7 for activity setting out, and the user profile storage section 37 is equivalent to the individual humanity news storage means M15. And it is lines L9-L11, L15, and L21 among the dialogue data illustrated to drawing 4 - drawing 8 . Dialogue data It is equivalent to the data D1 for activity setting out, and is line L12 -L14, L20, L22, and L23. Dialogue data It is equivalent to the 2nd data D2 for activity setting out, and is line L16 -L18. Dialogue data are equivalent to the 3rd data D3 for activity setting out, and it is a line L19. Dialogue data are equivalent to the 4th data D4 for activity setting out.

[0137] Next, other examples are explained. First, in the control unit 1 of this operation gestalt, the real situation of the weather is grasped with the instruction from VICS information and the user by the dialogue, or the signal from a sensor (S200). In addition, what is necessary is to perform agent utterance of the inquiry "whether it has cleared up now", and just to get "that is right" and answers, such as "disagreeableness and raining", from a user, in receiving instruction from a user.

[0138] Therefore, when the weather is fine, for example, the agent utterance "it is the weather best to golf today" can be performed, and the dialogue which has familiarity to a user can be carried out. moreover -- the case where the agent utterance "whether the now of the autumnal leaves of Arashiyama is best time to see" is performed, or a time zone is daytime when a season is autumn since time, the present four seasons, and a present time zone are grasped in the control device 1 of this operation gestalt based on the data of the clock built in self (S140) for example, -- "-- it is the time amount of lunch boiled rice soon. The next service area is 10km beyond. The agent utterance " can be performed and the dialogue which has familiarity to a user can be carried out.

[0139] the detailed content what kind of man it is in the entrainment condition of the situations in the car which a control unit 1 grasps, and is sitting on which seat on the other hand -- following [] -- it can describe like us.

[SEAT_ID ,PSTYPE,PATYPE,PTYPE ,PROFILE_ID]

In addition, SEAT_ID It is data showing the classification of a seat (sheet), and SEAT_ID =0 shows a driver's seat, SEAT_ID =1 shows a passenger seat, SEAT_ID =2 show the backseat right, SEAT_ID =3 show the center of a backseat, and SEAT_ID =4 show the backseat left.

[0140] Moreover, PSTYPE is data showing crew's sex, PSTYPE=0 shows except human beings, such as loading and an animal, PSTYPE=1 shows a male, and PSTYPE=2 show a woman. Furthermore, PATYPE is data showing the classification of crew's age, PATYPE=0 shows a suckling, PATYPE=1 shows a small child, PATYPE=2 show a schoolchild, PATYPE=3 show a junior high school student, PATYPE=4 show a high school student, PATYPE=5 show a young man, PATYPE=6 show the man in the street, and PATYPE=7 show an old man.

[0141] And PTYPE Are data showing crew's type and PTYPE =0 shows an operator (driver). PTYPE =1 shows an operator's spouse and PTYPE =2 show an operator's child. PTYPE =3 show an operator's parents, PTYPE =4 show other families of an operator, PTYPE =5 show intimate persons other than a family, PTYPE =6 show an operator's acquaintance, and PTYPE =7 show other men.

[0142] And PROFILE_ID is data showing crew's name or identifier further. Therefore, for example, in [SEAT_ID, PSTYPE, PATYPE, PTYPE, and PROFILE_ID] = [2, 1, 2, 2, and OO Taro], it means that OO Taro who is a boy schoolchild and is an operator's child is sitting on the backseat right.

[0143] And when a control device 1 grasps such a situation, agent utterance like for example, following (1) - (3) and actuation corresponding to it can be performed.

(1) The time of a car stopping from a run state, "it stopped. When you come outside Taro and a vehicle, please check back and open a door. Agent utterance of the warning " is performed.

[0144] (2) The time of a car departing from a stop condition, "depart. The backseat right covers a child protector. While performing the agent utterance ", the child protector of a back right-hand side door is made to be covered over other control devices.
(3) The time of a user uttering the two keywords "Taro" and a "TV phone", "introduce the camera of a TV phone to Taro. Whom is the partner who talks? After performing agent utterance of the inquiry ", other control devices are made to turn and adjust the location position and focus of a camera of a TV phone to Taro.
[0145] moreover, for example [SEAT_ID, PSTYPE, PATYPE, PTYPE, and PROFILE_ID] = [2, 2, 6, 1, and OO Hanako] [SEAT_ID, PSTYPE, PATYPE, PTYPE, and PROFILE_ID] =[2, 2, 0, and 2, O In O Sayaka], OO Hanako who is an operator's wife is sitting on the backseat right, and, moreover, the Hanako means embracing OO Sayaka who is a female suckling in her child.
[0146] And when a control unit 1 grasps such a situation, according to the operation situation of a car, it is a sharp curve rightward from "300-meter beyond. Please embrace Hanako and Sayaka firmly. Agent utterance of the warning " can be performed.
[0147] On the other hand, the 12-bit data (it is hereafter described as AUDIO_ENV) explained below can describe the content of the audio environment of the situations in the car which a control device 1 grasps again. Namely, AUDIO_ENV When the least significant bit is made into the 0th bit, For example, the 0th the ON/the bit of the OFF of a cassette are shown, and the 1st the ON/the bit of the OFF of a CD player are shown. ON/OFF of MD player are shown, and a triplet eye shows the 2nd the ON/the bit of the OFF of DVD. It is shown whether the 4th bit of the FM broadcasting of radio is received, and it is shown whether the 5th bit of the AM broadcast of radio is received. The 7th the ON/the bit of the OFF of television are shown, the 8th the ON/the bit of the OFF of video are shown, the 9th the ON/the bit of the OFF of a telephone are shown [it is shown whether the 6th bit of the broadcast of a road traffic center is received,], and the 10th bit and the 11th bit are bits of un-using it or a reserve.
[0148] Therefore, for example, in AUDIO_ENV = [1000 0001 0100], it means that a cassette, television, and a telephone are turned on. in addition -- this example -- [] -- the bit by the side of the inner leftmost is the 0th bit. And when a control device 1 grasps such a situation, the following agent utterance and actuation corresponding to it can be performed, for example.
[0149] First, the time of a cassette, television, and a telephone being turned on as mentioned above, "he is on the telephone. Please lower the sound volume of a cassette and television. The agent utterance " is performed. Furthermore, when it detected that the car went into the tunnel of a highway, it went into "tunnel. I tell broadcast of a road traffic center. After performing the agent utterance ", the sound volume of other audios (they are a cassette and television in this case) is lowered. In addition, this becomes AUDIO_ENV = [1000 0011 0100].
[0150] And after performing the agent utterance of "Making a headlight turn on", a headlight is made to turn on, when it can come, simultaneously the headlight of a car is not turned on. As mentioned above, although 1 operation gestalt of this invention was explained, it cannot be overemphasized that this invention is not limited to the above-mentioned operation gestalt, and various gestalten can be taken.
[0151] For example, although the control unit 1 of the above-mentioned operation gestalt was carried in the car, it can apply this invention indoors similarly to the equipment which controls various built-in devices. Moreover, although the control unit 1 of the above-mentioned operation gestalt inputted a user's utterance keyword, you may make it input the information by a user's key stroke as information in which the intention of a user was reflected.

[Translation done.]

* NOTICES *

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2.**** shows the word which can not be translated.
3.In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] It is the block diagram which illustrates the configuration of the control device of this invention.
[Drawing 2] It is a block diagram showing the configuration of the control device of an operation gestalt.
[Drawing 3] It is a flow chart showing the processing performed with the control device of an operation gestalt.
[Drawing 4] It is the 1 of the drawings explaining an example of a dialogue database.
[Drawing 5] It is the 2 of the drawings explaining an example of a dialogue database.
[Drawing 6] It is the 3 of the drawings explaining an example of a dialogue database.
[Drawing 7] It is the 4 of the drawings explaining an example of a dialogue database.
[Drawing 8] It is the 5 of the drawings explaining an example of a dialogue database.
[Description of Notations]
1 -- Control unit 3 -- Input unit 5 -- Microphone 7 -- Loudspeaker
9 -- Navigation equipment 11 -- Display 13 -- Air-conditioner equipment
15 -- Audio equipment 17 -- Communication device 19 -- Various sensors
21 -- System control section 23 -- Interface (I/F)
25 -- Voice input section 27 -- Speech synthesis section
29 -- Appliance control interface (appliance control I/F)
31 -- Internet address database 33 -- Retrieval control section
35 -- Dialogue data storage section L1-L23 -- Dialogue data
37 -- User profile storage section
M1 -- Input means M3 -- Device M5 -- Situation detection means
M7 -- Data storage means for activity setting out D1 -- Data for activity setting out
D2 -- 2nd data for activity setting out D3 -- 3rd data for activity setting out
D4 -- 4th data for activity setting out M9 -- Setting-out means
M11 -- Appliance control means M13 -- Demand presumption means
M15 -- Individual humanity news storage means M17 -- Modification means M19 -- Discernment means

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[Translation done.]
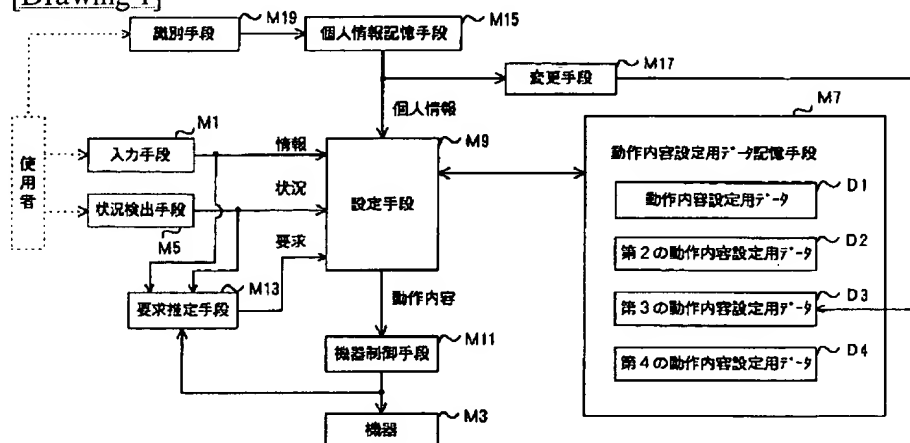
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DRAWINGS

[Drawing 1]

[Drawing 2]
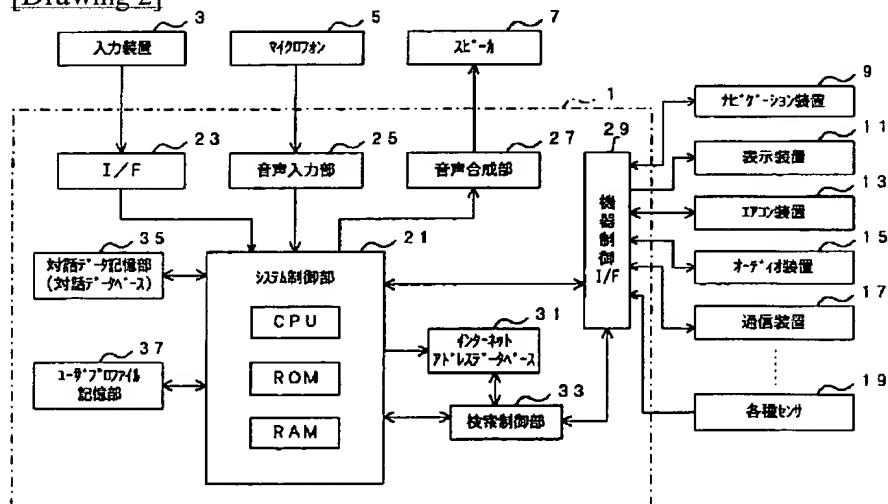
[Drawing 3]
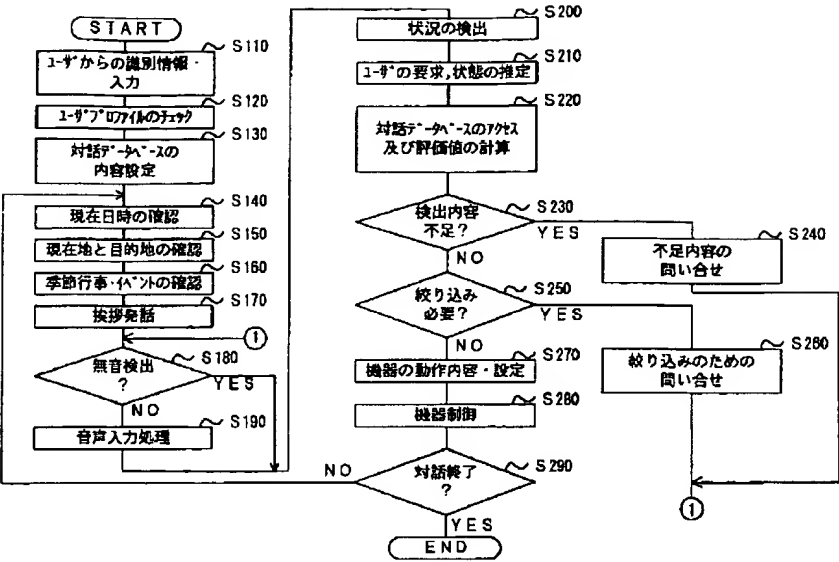
[Drawing 4]

	分類	季節	時間帯・日時	目的地	現在地	環境	車外状況	車内状況	要求	状態	個人情報
L1	挨拶		04:00〜11:00								
L2	挨拶		11:00〜18:00								
L3	挨拶		18:00〜04:00								
L4	挨拶	夏									
L5	挨拶	冬									
L6	挨拶						晴れ				
L7	労い		深夜								
L8	家族										子供有り

	ユーザ発話（認識語彙）	動作内容：「エージェント発話（標準形）」	推定要求	推定状態	推定関連要求
L1		発話：「おはようございます。」			
L2		発話：「こんにちわ。」			
L3		発話：「こんばんわ。」			
L4		発話：「暑いですね。」			
L5		発話：「寒いですね。」			
L6		発話：「今日は本当に良い天気ですね。」			
L7		発話：「夜遅いのに大変ですね。」			
L8		発話：「お子さんはお元気ですか。」			

[Drawing 5]

	分類	季節	時間帯・日時	目的地	現在地	環境	車外状況	車内状況	要求	状態	個人情報
L9	食事					一般道路					
L10	食事					高速道路					
L11	食事		<1998/5/20/11:00>		<刈谷>	一般道路					
L12	駐車場			<岡崎のf>	<刈谷>	一般道路			駐車場，食事		
L13	経路案内			<岡崎>	<刈谷>	一般道路			経路案内		

	ユーザ発話（認識語彙）	動作内容：「エージェント発話（標準形）」	推定要求	推定状態	推定関連要求
L9	{めし｜ご飯｜腹減った｜お腹すいた｜何か食べたい｜レストラン｜・・・}	検索・発話：「お食事ですね。この近くならば<a>，<b>，<c>など<X1>件のお店があります。どこで食べますか。」	食事	空腹	駐車場，休憩，飲み物
L10	{めし｜ご飯｜腹減った｜お腹すいた｜何か食べたい｜レストラン｜・・・}	検索・発話：「<d>パーキングエリアまであと<X2>分、<e>パーキングエリアならばあと<X3>分です。」	食事	空腹	
L11	<<岡崎>>，{めし}，{インド料理}	検索・発話：「<X4>時<X5>分に、<f>が予約できます。」	食事，行楽	空腹の前	駐車場，休憩，飲み物
L12		検索・発話：「駐車場は<g>が空いています。」	経路案内	移動の準備	
L13		検索・発話：「<h>は混雑していますので<i>で行くことをお勧めします。」			

[Drawing 6]

	分類	季節	時間帯・日時	目的地	現在地	環境	車外状況	車内状況	要求	状態	個人情報
L14	検索					一般道路		家族連れ	食事	空腹	
L15	買物		09:00～21:00			一般道路		家族連れ			
L16	買物		09:00～21:00			一般道路		家族連れ	買物	移動の準備	[Aデパート]によく行く
L17	趣味	冬									スキーが趣味
L18	趣味										ゴルフが趣味，[Dゴルフ場]によく行く

	ユーザ発話（認識語彙）	動作内容：「エージェント発話（標準形）」	推定要求	推定状態	推定関連要求
L14	{どこかいいところ}	検索・発話：「<○○レストラン>でどうですか。」			
L15	{買物｜ショッピング｜デパート}	検索・発話：「お買物でしたら、<j>と<k>が近くにあります。」	買物	移動の準備	駐車場
L16	{いつものところ｜よくいくところ}	検索・発話：「[Aデパート]ですね。今日は○○のバーゲンをやってます。」			
L17	<<C山>>，{スキー}	案内制御・発話：「<C山スキー場>へのルートガイドを開始します。」	スキー	快調	
L18	{ゴルフ}，{いつもの}	発話：「[Dゴルフ場]ですね。予約状況を調べますか。」	ゴルフ場予約	快調	天気予報，食事，ドライブ

[Drawing 7]

	分類	季節	時間帯・日時	目的地	現在地	環境	車外状況	車内状況	要求	状態	個人情報
L19	機器操作							乗員有/40℃以上/温度上昇中			
L20	機器操作							乗員有/30℃以上	{エアコン操作以外}		
L21	機器操作							乗員有/20℃以上			

	ユーザ発話（認識語彙）	動作内容：「エージェント発話（標準形）」	推定要求	推定状態	推定関連要求
L19		エアコン制御・発話：「車内温度が40℃を越えています。エアコン設定温度を下げます。」	エアコン温度下げ/コ定をする	暑い/喉が乾いた	
L20		発話：「暑いですね。エアコン設定温度を下げますか。」	エアコン温度下げ/コ定をする	暑い/喉が乾いた	
L21	{あつい｜あついなあ}	発話：「暑いですね。エアコン設定温度を下げますか。」	エアコン温度下げ/コ定をする	暑い/喉が乾いた	何か飲みたい，休みたい

[Drawing 8]

	分類	季節	時間帯・日時	目的地	現在地	環境	車外状況	車内状況	要求	状態	個人情報
L22	機器操作								エアコン温度下げ/コ定をする	暑い/喉が乾いた	
L23	機器操作								エアコン温度下げ/コ定をする	暑い/喉が乾いた	

	ユーザ発話（認識語彙）	動作内容：「エージェント発話（標準形）」	推定要求	推定状態	推定関連要求
L22	{はい｜うん｜下げる｜『無応答』}	エアコン制御・発話：「わかりました。エアコン設定温度を下げます。」	エアコン温度下げ	暑い/喉が乾いた	何か飲みたい，休みたい
L23	{いいえ｜いや｜下げない｜このまま}	エアコン制御・発話：「このままにしておきます。」	エアコン操作不要	平常	

[Translation done.]